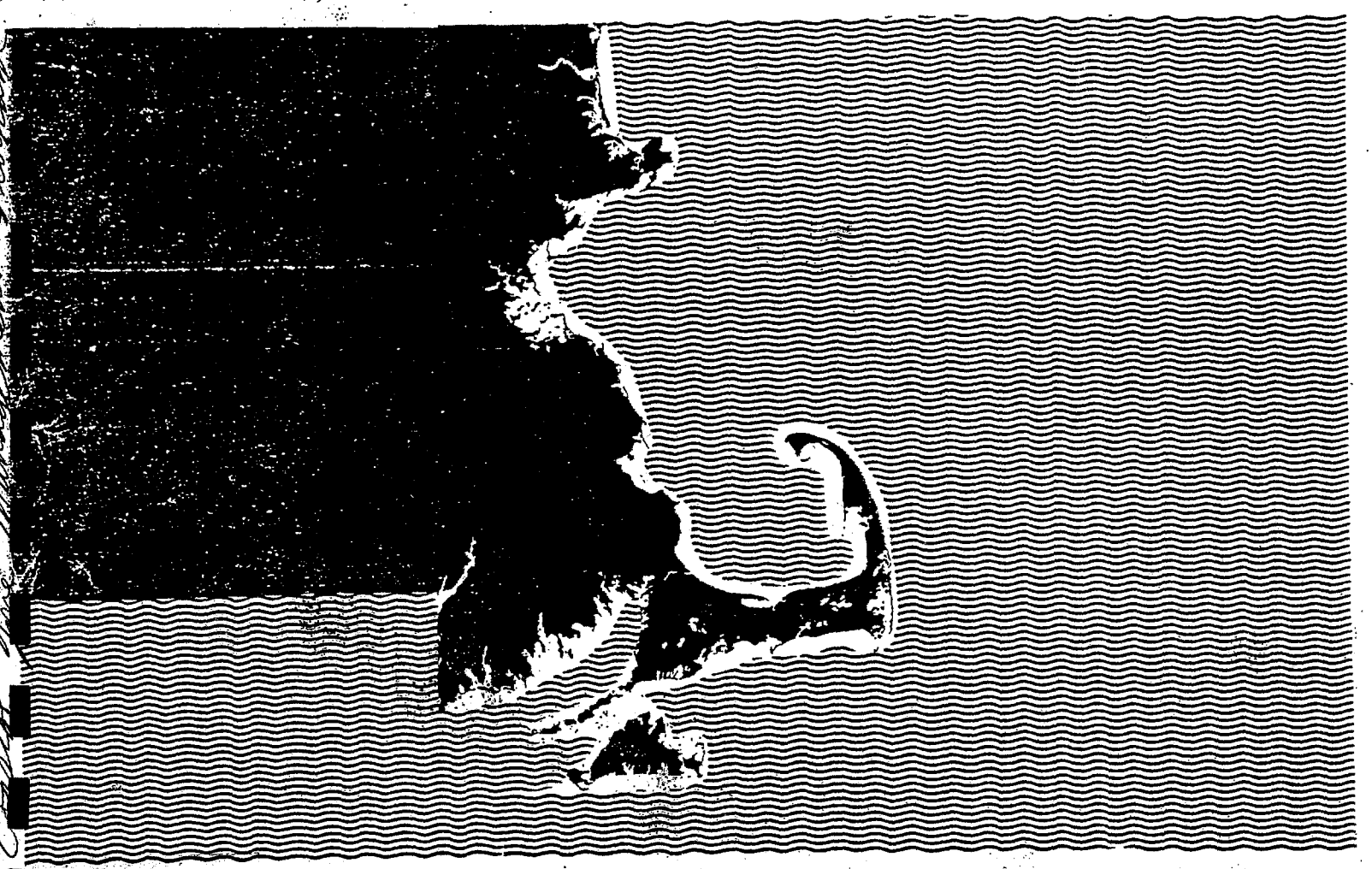
Attachment 12
Pat

THE SHORELINE DEVELOPMENT HANDBOOK



A Guide to State & Federal Permits Governing Construction & Dredging in the Massachusetts Coastal Zone

1986

The Shoreline Development Handbook

A Guide to State & Federal Permits
Governing Construction & Dredging in the
Massachusetts Coastal Zone

prepared by Harriet Diamond
Massachusetts Coastal Zone Management Office
Executive Office of Environmental Affairs

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Preface

The Massachusetts shoreline, traditionally a magnet for human activity of every description, is currently experiencing a surge in development interest that is likely to continue well into the 1900s. The protected waterfronts in ports and harbors are essential to a variety of industries including fishing, shipping and related activities; cruise and ferry services; and recreational boating interests.

In addition, the harborfronts in many coastal communities have become the focus of major redevelopment programs featuring restaurants and retail shops, parks and open spaces, and housing and office buildings. Such activities are enhanced by the aesthetics of a seaside location and provide numerous opportunities to the general public for physical and visual access to the water's edge.

Among the structures that are expected to be constructed or repaired in the Massachusetts coastal zone in the near future are a host of piers, wharves, bulkheads, revetments, barges, breakwaters, roads, bridges, pipes and pipelines, to say nothing of the myriad of buildings that are projected to occupy the waterfront and related backlands. Many of these projects will bring about pressure to dredge new channels and deepen existing ones (processes known as "improvement" dredging) as well as to periodically remove accumulated sediments which reduce the depth of existing commercial and recreational channels and harbor areas (a process known as "maintenance" dredging). Finally, both the human occupance of shorelands and dredging activity in waterways will produce waste material which must be disposed of in an environmentally appropriate manner, often within the coastal zone itself.

One of the important roles of government in shoreline development is to ensure that the development process takes place in a way that is environmentally sound, does not compromise public health and safety, and promotes efficient allocation of coastal resources. The state/federal permitting system also serves as a mechanism by which citizens can significantly participate in state and federal decision-making.

The Commonwealth of Massachusetts has a long history of pursuing these goals, through the licensing and coordination of waterfront construction and dredging projects. Several state agencies share responsibility for assessing the potential environmental effects of development and dredging in state wetlands, as well as disposal of dredged material on uplands, and for contracting for dredging and dredged material disposal services. The Coastal Zone Management Office also reviews projects involving the ocean disposal of dredged material outside of the state's three mile baseline of jurisdiction (See Figure).

At the federal level, agencies such as the United States Army Corps of Engineers, the Environmental Protection Agency, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service review dredging projects and the U.S. Army Corps of Engineers issues or denies waterfront construction, dredging, and dredged material disposal permits.

The intent of this handbook, prepared by the Massachusetts Coastal Zone Management Office, is to expedite the permitting process for any shoreline construction and dredging project undertaken in the Commonwealth. It provides planners, regulatory agencies, permit applicants and private developers with an explanation of the permit review process for development activities in the coastal zone and the permit requirements of the state and federal regulatory agencies. Permits and approvals required by cities and towns are listed, however, the reader is encouraged to contact the local planning agency where a particular project is located for a detailed description of the local permitting process process.

Where to Go for More Information

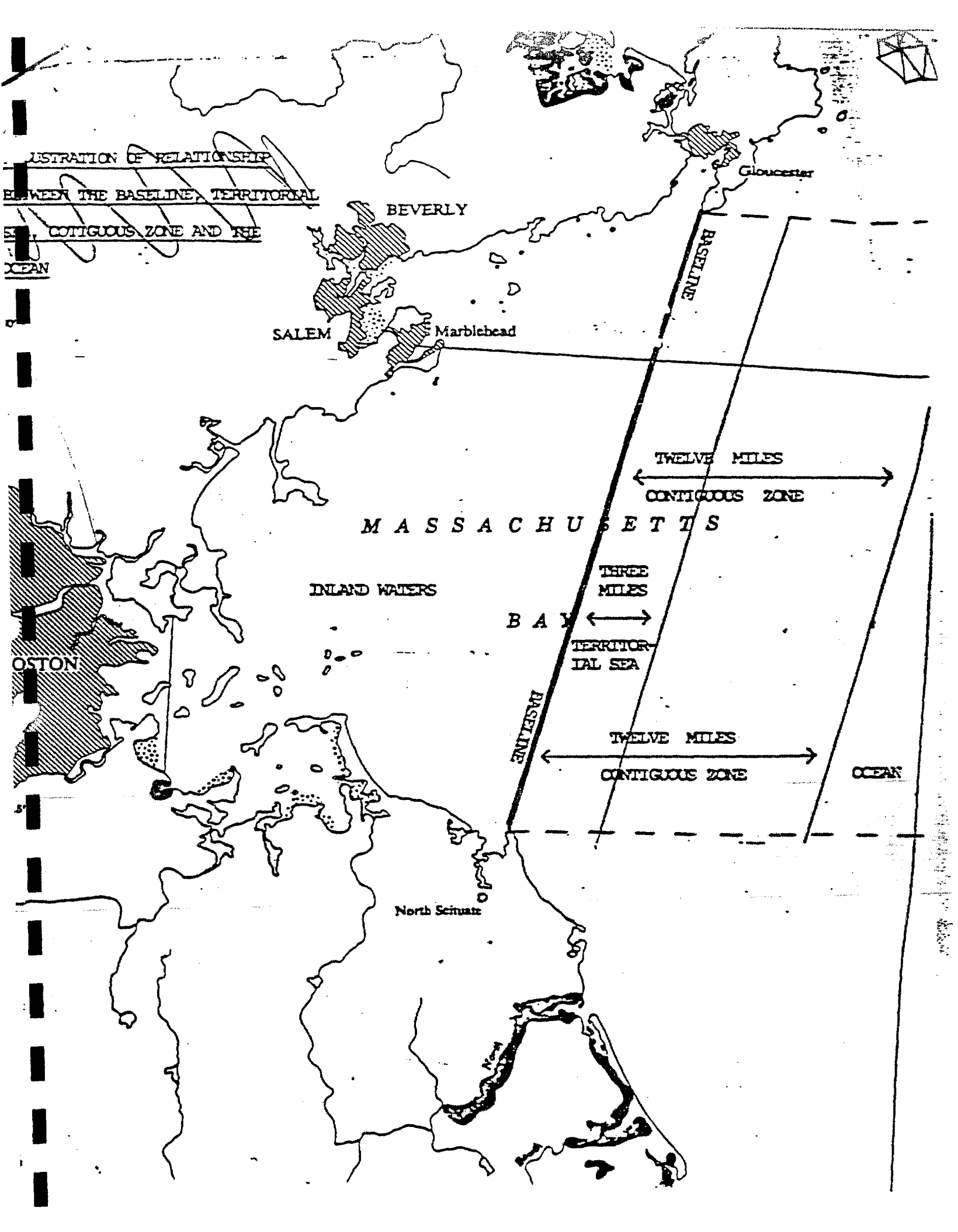
All proposed waterfront development and dredging projects require review by local, state, and federal agencies. As part of this process, some projects may require the preparation of an Environmental Impact Report (required by the state but prepared by the project proponent) or an Environmental Impact Statement (required and prepared by the federal government).

Copies of state regulations can be reviewed at local planning agencies, town halls, the offices of state environmental agencies, or obtained at the bookstore at the State House in Boston.

Federal regulations regarding coastal development, dredging or dredged material disposal may be obtained from the U.S. Army Corps of Engineers or from the Federal Register.

A list of state and federal permits and regulations involved in coastal development and dredging projects can be found in Table 1 and a summary of permits required for specific construction and dredged material disposal actions is provided in Table 2.

Early guidance with both the technical and regulatory aspects of a project can shorten the permit review process considerably. Regulations and permit applications may be reviewed or obtained at the "Permit Advisory Service" of the Massachusetts Coastal Zone Management Office. This service is designed to provide a centralized source at which a project proponent may review all of the necessary regulations and permit applications for a project. The service also provides technical assistance for project planning.


LUSTRATION OF RELATIONSHIP
BETWEEN THE BASELINE, TERRITORIAL
, CONTIGUOUS ZONE AND THE
OCEAN
BEVERLY
Gloucester
BASELINE
SALEM
Marblehead
TWELVE MILES
CONTIGUOUS ZONE
MASSACHUSETTS
INLAND WATERS
THREE MILES
B A Y
TERRITORIAL SEA
OSTON
BASELINE
TWELVE MILES
CONTIGUOUS ZONE
OCEAN
North Scituate

MASSACHUSETTS ENVIRONMENTAL POLICY ACT UNIT (MEPA)

Permit:	Certificate of the Secretary of Environmental Affairs
Authority:	Massachusetts Environmental Policy Act M.G.L. c.30, ss 62-62H Massachusetts Environmental Policy Act Regulations 301 CMR 10.01 - 10.35

MEPA regulations require project proponents to fully disclose the potential environmental impacts that will result from a project action and to use all feasible measures to avoid or minimize adverse environmental impacts.

MEPA reviews information and data submitted by the applicant in the Environmental Notification Form (ENF) and comments from the regulating agencies and the public to determine whether an Environmental Impact Report (EIR) is required.

No state permits may be issued until the Secretary certifies that 1) no EIR is required or 2) the submitted EIR is adequate.

Thresholds which categorically include or exclude a project in the MEPA review process are defined in the MEPA regulations. For a complete listing of these thresholds, see the regulations cited above or contact the MEPA office. The following examples of categories and thresholds for inclusion in the requirement to file an ENF pertain to dredging and related projects

1. Projects involving the issuance of a Superceding Order of Conditions under the Wetlands Protection Act for dredging, removing, filling, or alteration of more than one acre of resource area subject to the Coastal Wetlands Regulations.

2. Projects proposed under a Chapter 91 license that involve the filling, dredging, constructing, riprapping or other direct alteration of more than 500 feet of waterway bank.

3. Projects involving the licensing of construction for new marinas having more than 50 slips.

4. Projects involving the dredging of 10,000 or more cubic yards of sediment.

HOW TO FILE

- Examine Section 10.32 of the above cited regulations and consult with the MEPA Office to determine whether the project must be included in a MEPA review.

- If the project is not determined to be not categorically excluded under Section 10.32 of the MEPA Regulations, the applicant must submit an Environmental Notification Form (ENF) and a Water Quality Certificate application to the MEPA Unit and to all participating agencies and entities as designated in Appendix B (Section 10.31) of the MEPA Regulations.

  The ENF is a project information form which requests detailed information on the project, including engineering plans and anticipated environmental impacts. It must be filed no later than 10 days after filing the first application for other required state permits or for state financial assistance for a project.

  When a project is directly undertaken by a state agency, the ENF will usually be filed: 1) one year prior to the projected project commencement date; 2) prior to entering into a contract for the final design; or, 3) within 10 days of any permit application to another agency, whichever is earliest.

- If there are changes to a proposed project, the applicant must notify the MEPA Unit, which will decide whether the change significantly affects the environmental consequences of the project and warrants additional review or submission of a new ENF.

  Examples of such project changes include changes in project size, increases in the emission of pollutants, or increases in the use or depletion of resources.

THE REVIEW PROCESS
ENF and Comment Period

- Notice of the receipt of an ENF and a 21 day public comment period will be published by the MEPA Unit in the Environmental Monitor (see Appendix IV).

- During this 21 day time, the proponent, all participating parties, and any agency which has jurisidiction by law or special expertise may, by phone, letter, or at a designated meeting, consult with the proponent and MEPA and reqest additional information. These parties may then submit recommendations to the MEPA Unit regarding the need to prepare an EIR.

- At the end of the public comment period, the Secretary of Environmental Affairs will issue a certificate stating whether or not an EIR is required.

Scoping Session and Comments

- If the project requires an EIR, the MEPA Unit will define the scope of the EIR during the initial 21 day review period, in consultation with the applicant and participating agencies.

  Interested members of the public are invited to submit comments on this scope to the MEPA Unit by the twentieth day following publication of the ENF in the Environmental Monitor. MEPA will then determine the form, content, level of detail and alternatives required for the EIR and may establish other guidelines as to its preparation.

  This scope is issued as part of the Certificate of the Secretary of Environmental Affairs.

Draft EIR

- Drafts of the EIR will be submitted by the applicant to the MEPA Unit and to other agencies listed in the MEPA regulations. Notice of the availability of the Draft EIR will be published in the Environmental Monitor. Comments by public agencies and the public on the Draft EIR must be received by MEPA within 30 days of publication of its availability.

- Within 7 days of the end of the Draft EIR public comment period, the MEPA Unit will issue a written statement indicating whether or not the Draft EIR adequately complies with the MEPA regulations and the Scope issued by MEPA. If MEPA does not issue a statement, this will be considered in, effect, a statement that the draft does comply.

Final EIR

- After the comment period on the Draft EIR, the proponent must answer all questions raised by reviewers of the Draft EIR in a Final EIR. The availability of the Final EIR must also be noticed in the Environmental Monitor.

- Public comments on the Final EIR must be received by MEPA within 30 days of publication of its availability.

- Within 7 days after the end of the public comment period, MEPA will issue a written statement indicating whether the Final EIR adequately complies with its regulations.

- If an EIR is required for a project, other state agencies may not act on their permit applications until 60 days after the availability of the Final EIR but must act within 90 days of publication of the notice of availability of the Final EIR, unless the filings to these agencies are incomplete.

THE REVIEW/PERMITTING AGENCIES

DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING
Division of Wetlands and Waterways

Permit: Order of Conditions

Authority: Massachusetts Wetlands Protection Act, M.G.L. c.131, s.40; Massachusetts State Wetlands Regulations, 310 CMR 10.00

Part I - Regulations For All Wetlands 310 CMR 10.01 - 10.20
Part II - Additional Regulations for Coastal Wetlands. 310 CMR 10.21 - 10.50
Part III - Additional Regulations for Inland Wetlands. 310 CMR 10.51 - 10.98

The purpose of the Coastal Wetlands Regulations is to protect seven public interests provided by various wetland resource areas. The public interests, defined in the Wetlands Protection Act, include fisheries, land containing shellfish, storm damage prevention, flood control, groundwater supplies, the prevention of pollution, and the protection of public or private water supply.

Projects subject to the Coastal Wetlands Regulations are those which involve filling, dredging, removing, or altering 1) any coastal wetland, coastal beach, dune, tidal flat, salt marsh, estuary, creek, river, stream, pond, or lake, or waters that are anadramous/catadramous fish runs or, 2) land under said waters, land subject to tidal action, coastal storm flowage, or flooding.

The regulations include performance standards for projects on land under the ocean, in designated port areas, on coastal beaches, coastal dunes, barrier beaches, coastal banks, rocky intertidal shores, land under salt ponds, land containing shellfish, and on salt marshes. For example, a project "shall not destroy any portion of a salt marsh" and "shall not have an adverse effect on the productivity of a salt marsh."

Under the Wetlands Protection Act, all projects which involve filling, removing or altering any of the resource areas listed above require the filing of a Notice of Intent with a local Conservation Commission, which may then deny the project or issue an Order of Conditions.

In general, the Order of Conditions Conditions is in effect for three to five years from the date of issuance. However, an Order of Conditions for dredging is in effect for ten years. During that time period, written notice for each maintenance dredging activity within the same dredging footprint, must be

submitted by certified mail, but a new Order of Conditions is not required and the original Order remains in effect.

In some cases, a Notice of Intent and Order of Conditions may also be required for the disposal or dewatering of dredged material. Often, the Order of Conditions includes both the dredging and disposal aspects of a project. In these cases, if the disposal site remains the same, the Order of Conditions for the disposal is effective for five years. If the disposal site changes during maintenance dredging that is covered under the original permit, a new Order of Conditions is required.

HOW TO FILE

- Contact your Conservation Commission or the DEQE-Division of Wetlands in your region to obtain a Notice of Intent Form and to determine whether your project involves maintenance or improvement dredging.

- Submit to your local Conservation Commission and the DEQE Regional Office:

  * A completed Notice of Intent form;
  * $25.00 filing fee;
  * A locus map, including the nearest roads and streets;
  * An 8½" x 11" section of a U.S. Geological Survey quadrangle sheet showing the location of the proposed activity;
  * A project plan for dredging and disposal (if applicable);
  * Sediment sampling tests (see p.__: Testing Requirements)

REVIEW PROCESS

For a detailed description of the Wetlands review process, see the Massachusetts Wetlands Protection Act (MGL ch. 131, sec. 40) and the Coastal Wetlands Regulations. In summary, after receipt of the above information:

- The Conservation Commission will review the project application and information with reference to the state Coastal Wetlands Regulations and will conduct a public hearing within 21 days of receipt of a completed Notice of Intent.

- The DEQE Regional Office will issue a project file number upon receipt of the completed Notice of Intent from the Conservation Commission.

- The Conservation Commission may then issue an Order of Conditions (Wetlands Permit) within 21 days after the close of the public hearing. The Order of Conditions will state the conditions that have been attached to the project, such as time restrictions for project construction, monitoring requirements, and permitted dredged material disposal site locations.

- Within 10 business days after issuance of the Order, an appeal of the Order may be isssued by DEQE or it may be requested of DEQE by the applicant, any abutters to the project, any ten residents of the city or town where the work is to be done, or any person aggrieved by the Order.

- Within 70 days from the receipt of such a request, the Commissioner of DEQE or his designee will issue a Superceding Order of Conditions which shall include conditions which may regulate or prohibit the proposed activity.

- The Superceding Order of Conditions may be appealed by the same persons listed above, through an ajudicatory hearing in accordance with Chapter 30A of the Massachusetts General Laws.

ADDRESSES

DEQE - Division of Wetlands and Waterways (main office)
1 Winter Street
Boston, MA 02108
617-292-5695

DEQE - Northeast Region (Cohasset to Salisbury)
209 New Boston Road
Woburn, MA
617-935-2160

DEQE - Southeast Region (Scituate to Rhode Island border, Cape Cod and the Islands)
Lakeville Hospital
Lakeville, MA
617-727-1440

1) DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING
Division of Wetlands and Waterways

Permit: Wetlands Order of Restrictions

Authority: Massachusetts Wetlands Restrictions Act
G.L. c.130, s.105
302 CMR 4.00 - 4.19

While the federal Wetlands Protection Act (M.G.L. c.131. s.40) considers projects proposed in wetlands areas on a case by case basis, the Massachusetts Wetlands Restriction Program regulates significant wetlands resource areas in advance through mapping and enacting permanent Orders of Restriction.

Ownership rights are not affected by these restrictions, which are designed to guide land use towards the promotion of public health, safety and welfare; and the protection of public and private property, wildlife and marine fisheries.

Welands areas are evaluated for restriction and mapped by the program staff. After a public hearing and with approval of the Department, specific areas are restricted. The Order of Restriction is recorded in the appropriate County Registry of Deeds and a marginal notation is made either on the deed of a recorded parcel or the Land Court Certification of a registered parcel.

The Order generally prohibits large scale alterations such as filling, dredging and discharge of pollutants. Permitted activities generally include agriculture and aquaculture; building and maintenance of docks and piers, upkeep of existing roads, marine channels and structures; and construction and maintenance of temporary structures that are erected on pilings.

Contact the Wetlands Restriction Program to determine if the proposed activity is located in a restricted wetland, and if so, what restrictions have been placed on the area.

ADDRESS

DEQE - Division of Wetlands and Waterways
Coastal Wetlands Restriction Program
1 Winter Street
Boston, MA 02108
617-727-3160

DEQE -Division of Wetlands and Waterways

Licenses and Permits:	Chapter 91 License (projects involving dredging and construction) Chapter 91 Permit (projects involving dredging only)
Authority:	Massachusetts State Waterways Regulations, M.G.L. c.91; 310 CMR 9.01 -9.99

Commonly known as the state tidelands law, Chapter 91 regulates activities including construction, dredging and filling carried out in tidelands as well as in Great Ponds and certain rivers and streams.

Traditionally the purpose of these regulations has been to protect the public rights of navigation, fishing and fowling in the foreshore (the areas between the high and low tide marks), which is privately owned, and all rights in Commonwealth tidelands (all lands and waters seaward of the low water mark and within the three mile seaward limit of the Commonwealth's jurisdiction (see fig__).

Pursuant to the 1983 amendments to the law, the term tidelands was expanded to encompass both flowed tidelands (those that presently lie between the mean high water mark and the three mile seaward limit of state jurisdiction) and filled tidelands (those which at one time were flowed but presently lie above the mean high water mark due to the presence of artifical fill).

Chapter 91 licenses are issued by the Department of Environmental Quality Engineering (DEQE) Division of Wetlands And Waterways. No license is issued unless three basic conditions are met:

* all proposed structures and fill must comply with a set of generic requirements concerning environmental and structural criteria, the right of the public to fish fowl and navigate and pass over and through water.

* the project as a whole, exclusive of fill or structures for water-dependent use of private tidelands, must be determined to serve a proper public purpose and to provide greater public benefit than detriment to public rights in the tidelands.

* all proposed structures and fill for non-water dependent use of tidelands must be consistent with the policies of the Massachusetts Coastal Zone Management Program.

In addition, chapter 91 establishes criteria for licensing and permitting such as:

- Structural Requirements - For example, except in Designated Port Areas, any seawall, bulkhead or revetment must be built landward of the high water mark to permit proper slope design. Also, if a proposed solid fill structure will interfere wil sediment transfer processes, it will not be licensed by the Division.

- Criteria To Reduce Hazards To Navigation - For example, piers or other structures which extend into an existing channel and impede free passage, impair any line of sight required for navigation, or require the alteration of the established course of vessels will not be licensed.

- Criteria To Assure Public Rights and Public Lateral Access - For example, any dredging which significantly interferes with any person's right to approach their property from the sea will not be licensed. Similarly, all projects which will obstruct lateral access below the low water mark must be constructed to allow for public passage in the exercise of the reserved public rights of fishing, fowling & navigation.

- Criteria to minimize adverse effects to resource areas, land under the ocean, coastal beaches, tidal flats, banks, salt marshes and ponds, shellfish beds and areas, and anadromous/catadromous fishruns - For example, a proposed project in a salt marsh or within 100 lateral feet of a salt marsh will not be licensed if it will destroy any portion of the salt marsh or have an adverse effect on the productivity of the salt marsh.

Finally, DEQE is considering a regulation that would categorically exclude specified uses in certain locations because they do not meet the statutory tests for approval or are otherwise not in keeping with the intent of the Act.

These prohibitions may apply to Areas of Critical Environmental Concern (ACEC's), Designated Port Areas and certain flowed tidelands.

HOW TO FILE

Submit to the DEQE-Division of Wetlands and Waterways:

* A completed Chapter 91 license or permit application;

* Project plans drawn according to size, scale, and color detailed in the Chapter 91 Regulations. These drawings and plans should include factors such as:

- the state harbor line and the United States Pierhead and Bulkhead Lines (if any) opposite the proposed structures. These may be obtained from the DEQE- Division of Wetlands and Waterways and from the U.S Army Corps of Engineers;

- shore and boundary lines

- mean high, mean low and extreme low water lines;

- all existing structures and corresponding license numbers including those standing in the water at mean high tide;

- dimensions, outlines, and main features of all project proposals to be licensed;

- the amount of fill to be placed in tidewater;

- cross sections to show the number of piles (if any) to be driven

* The volume of sediment to be dredged;

* The proposed dewatering and disposal site;

* Changes in bathymetry resulting from the dredging.

REVIEW PROCESS

- Upon receipt of an application, the Division of Wetlands and Waterways will evaluate evaluate the need for supplemental information in making proper findings under the chapter 91 regualtions and will determine whether the project is subject to review under the Massachusetts Environmental Policy Act Regualtions (MEPA).

  Notice will be given by the Division to the aldermen, selectmen, or city council and the Conservation Commission of the municipality in which the work is to be performed, and to the federal and state regulatory agencies. This notice will state that any aggrieved person or ten citizen group that submits written comments may also petition to intervene to become a party within 45 days.

  The proponent must advertise the project and mandatory public hearing in the affected city or town for one day in a newspaper having a general circulation in the area.

  Any person may submit written comments to the Division and to MEPA on any license or permit application within 45 days after notice of the application is published in the newspaper.

No permit or license will be issued sooner than 45 days after publication of the project notice in the newspaper. If the project is categorically included for MEPA review, the Chapter 91 license or permit will only be issued after the MEPA review is completed.

The Division will act on a license or permit within 90 days after the publication in the Environmental Monitor of the availability of the Final Environmental Impact Report, within 90 days of the Secretarial determination (MEPA decision) that an EIR is not required, or within 90 days after the completion of the license application, whichever is the latest.

The Division will assess fees for projects involving actions resulting in the displacement of water below the mean high water mark.

ADDRESS

DEQE - Division of Wetlands and Waterways
1 Winter Street
Boston, MA 02108
617-727-3160

DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING - DEQE
Division of Water Pollution Control

Permit:	Water Quality Certificate
Authority:	Water Pollution Control Regulations Massachusetts Clean Water Act M.G.L. c, 21, s.27 (12). 314 CMR 9.00 - 9.91

The purpose of the Water Pollution Control Regulations is to ensure that dredging, dredged material disposal, filling, coastal construction, and discharge activities in navigable waters of the Commonwealth are in compliance with state water quality standards and with Division regulations and policies.

Under the Water Pollution Control Regulations, navigable waters are those waters between mean high water and three miles seaward of baseline which is the seaward limit of state jurisdiction (See Figure #1).

According to Section 401 of the Federal Water Pollution Control Act (33 U.S.C. 1341), any applicant for a federal license or permit to conduct any activity which may result in a discharge into the navigable waters of a state must provide the federal licensing agency with certification from that state's water pollution control agency that the proposed discharge will not violate applicable federal or state discharge limitations or water quality standards.

Thus, dredging, dredge disposal, filling in navigable waters, and upland disposal which involves dewatering runoff into navigable waters each require a state Water Quality Certificate. The disposal of sediments in ocean waters beyond the state three mile limit is not regulated by the Division of Water Pollution Control.

The Division requires a completed Standard Application Form in order to determine whether a project complies with state and federal water quality regulations. This form requests detailed project information on factors such as project location, channel width and depth, volume of material to be dredged, etc. In addition, environmental testing of grain size, bulk sediment chemical, and bioassay/bioaccumulation tests may be required to assess the quality of the dredged material.

The Division will determine which tests are required, the number and location of sediment samples to be collected, and the sampling methodology. The results of each of these tests (physical and chemical characteristics) are then classified according to standards provided in the Water Pollution Control Regulations.

As part of this classification, the sediments are assigned a type according to a range from coarse grained material, such as sand, to finer sediments such as clay, and placed in categories according to their con-

centration of chemical contaminants. A listing of sediment types and categories, as defined in the Water Pollution Control Regulations, is provided in Table__.

On the basis of this classification and the completed application form, conditions for dredging are imposed, permitted disposal methods and site locations are stipulated, and a Water Quality Certificate is issued for the project.

HOW TO FILE

Submit to the Division of Water Pollution Control:

- a completed Standard Application Form and/or Supplemental Information Form;
- results of physical, chemical and biological tests of the dredged sediments;
- plans, maps, required drawings, etc.

REVIEW PROCESS

- A Water Quality Certificate cannot be issued until the MEPA review is completed. The Division will act on a Water Quality Certificate application within 90 days of the publication of the notice of the availability of the Final EIR, within 90 days of publication of the notice that an EIR is not required by MEPA, or within 90 days of the completion of the full application, whichever is the latest.

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DEQE - Division of Water Pollution Control

Permit: Sewer Extension and/or Connections Permit

Authority: M.G.L. c. 21, s.43, CMR - none

The purpose of the sewer extension and connection permit is to ensure the proper design and use of sewerage systems as new facilities are connected to the main system. The capacity of downstream sewer lines and treatment facilities to adequately carry and treat additional flow is examined during the review process.

This review ensures that inadequate downstream capacity does not result in sewerage discharge into Massachusetts waters or that any downstream reduction in sewage treatment levels do not violate the National Pollutant Discharge Elimination system permit for the main system.

(For a discussion of permits related to subsurface sewage disposal facilities (Title 5), refer to page __ under "Additional Planning Considerations.")

HOW TO FILE

- Request approval of extension/connection permit application the municipality or district in which the sewage system connection is to be made.

- Submit to the Division of Water Pollution Control:

  * a completed permit application;
  * the above referenced local approval;
  * construction plans and specifications of the proposed connection/extension, according to the Division's requirements.

The Review Process

For a detailed description of this permit review process, see the above referenced laws and contact the Division. In summary, after receipt of the above information:

- The Division will make an initial determination to issue or deny the permit and will determine permit conditions within 30 days of receipt of the application.

- Within twenty 21 days from the publication of the initial determination mination, any interested person may comment and request a public hearing.

- The Division will issue a final determination to issue or deny the permit. Within thirty days the applicant or concerned parties may request an adjudicatory hearing. The extension/ connection permit is then granted or the denial becomes final.

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DEQE - Division of Water Pollution Control

Permit:	National Pollution Discharge Elimination System (NPDES)
Authority:	MGL, c.21 s.43, 33 USC 1342 (section 402 of the Federal Water Pollution Control Act).
	Massachusetts Water Quality Standards (Massachusetts Register Issue No. 124, September 21, 1978). Effluent Standards promulgated by the EPA (40 CFR Part 400 et. seq.); and Standard Rules for Adjudicatory Proceedings.

Any point source discharging pollutants into the waters of the United States requires a NPDES permit. Federal definition of such sources may not coincide exactly with Massachusetts definition, therefore, anyone proposing to discharge pollutants (including power plant cooling water) within the Commonwealth should contact both the Environmental Protection Agency and the Division of Water Pollution Control.

The purpose of the NPDES program is to protect water quality. The conditions of the permit establish pollutant discharge quantity and quality limitations in order to maintain quality classifications assigned to the waters of the Commonwealth or the Federal effluent standards assigned to a particular category of sources, whichever is more stringent.

The permit also establishes interim levels of pollutants which may be discharged from a point source where the treatment technology currently employed by such a source is unable to meet final limits established in the permit. In this case the permit also establishes an implementation schedule for construction of the needed technology.

All permits require the permittee to monitor pollutant levels in its discharge and to report sample analyses to both the EPA and the Division of Water Pollution Control in accordance with a schedule in the permit.

Permits are issued for a term not exceeding five years.

How To File/The Review Process

By written agreement, the United States Environmental Protection Agency (EPA) and the Massachusetts Division of Water Pollution Control (DWPC) jointly process and issue permits for discharges in the Commonwealth. The applicant must file with both agencies. The review process, which is directed by federal requirements, may take up to two years if parties exercise their right to ajudicatory hearings.

For a detailed flow chart and explanation of the review process, contact the Division of Water Pollution Control.

Other Division of Water Pollution Control Permits

1. Subsurface Sewage Disposal Facilties

MGL c.111, s.17,; c.21A, s.1,
CMR 310:15.19; c.21, s.43

All subsurface sewage disposal systems require approval for construction. Systems servicing less than 15,000 gallons per day require approval of the Division via the issuance of this permit. For subsurface discharge of industrial waste of any amount, discharge plan approval and permit issuance by DEQE is required.

2. Industrial Waste Treatment Facilities Approval

MGL c.21, s.27(13), Massachusetts Register Issue number 124, September 21, 1978). Treatment must satisfy water quality standards, effluent limitations (40 CFR part 400) and/or sewer use ordiance.

Approval is required for all new industrial waste water treatment facilities or significant modifications of existing facilities. A review is made to determine whether the proposed treatment will meet water quality standards, effluent limitations, and other applicable regulations, and whether the proposed design is in accordance with modern sanitary engineering practice.

3. Marine Oil Terminal License

MGL c.21, ss. 50-50A CMR - none

License is required for all terminals in the Commonwealth for loading or discharge of petroleum products from vessels.

ADDRESS

DEQE - Division of Water Pollution Control
1 Winter Street
Boston, MA 02202
617-727-3855

DEPARTMENT OF ENVIRONMENTAL ENGINEERING
DEQE-Division of Water Supply

Permit: Cross Connection Permit

Authority: M.G.L. c.111, s.160A, 310 CMR 22.22

A cross connection permit is required whenever there is a connection between a potable water supply and nonpotable water, including water sources for fire protection, chemical-containing sprinkler systems, boiler feed water, recirculated chilled water systems, process waters, hospitals and manufacturing plants.

HOW TO FILE

- Submit design data sheet to DEQE Regional Office

THE REVIEW PROCESS

- Region will approve or disapprove the permit application within 60 days based upon diagram and compliance with regulations.

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DEQE - Division of Water Supply

Permit: New Source Approval

Authority: M.G.L. c.111, s.5G, 17, 160, 310 CMR

Approval is required for the construction of a new system or the substantial modification of an existing system providing piped water, if the system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days per year. It does not apply to a system which: 1) consists only of distribution storage facilities, 2) obtains all of its water from another system regulated by DEQE; 3) does not sell water to any person, and; 4) is not a passive carrier.

ADDRESS

DEQE - Division of Water Supply
1 Winter Street
Boston, MA 02108
617-727-2692

DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING
Division of Solid and Hazardous Waste

Permit:	Waste Disposal Facility, Landfill/Upland Dredged Material Disposal Site Plan Approval
Authority:	M.G.L. c.111, s.150A; Regulations for the Disposal of Solid Wastes by Sanitary Landfill, 310 CMR 99.00, 310 CMR 30.00 E.P. Toxicity

The Solid Waste Regulations are intended to provide effective criteria and methodology for the approval of sanitary landfills for solid waste disposal.

In the Commonwealth of Massachusetts, material is considered a solid waste if it is both non-hazardous and 18-20% solids. Dredged and excavated sediments are non-hazardous if they are less than 50 ppm polychlorinated biphenyls, less than 3% oil and grease and if they pass the EP Toxicity Test (see page ____). Local Boards of Health use these criteria to evaluate new land areas for use as landfills and to make site approvals for the upland disposal of dredged and excavated material.

The siting criteria provided in the solid waste regulations include prohibitions against the use of wetland areas, areas subject to flooding, and areas where the lowest point of refuse will be less than four feet of earth from maximum groundwater elevation. The regulations also provide criteria for site operation.

For a complete list of requirements and criteria for a plan approval and site operation, contact the Division of Solid and Hazardous Waste and the local Board of Health. For information on upland disposal of dredged sanitary landfill, contact the DEQE-Regional Office (see page ___).

It is important to note that even if chemical tests indicate that the levels of metals or PCB's in the sediments are not classified as "hazardous" but are significantly high, they may require special handling and be considered a "special waste". Again, this would require local Board of Health approval.

If the materials are classified as hazardous, the sediments will require a manifest from point of dredging to the point of disposal, a licensed operator to transport the hazardous waste, and disposal at a licensed hazardous waste facility. For additional information regarding the disposal of hazardous dredged material, contact the Division of Solid and Hazardous Waste.

HOW TO APPLY

To utilize a new landfill site submit to the DEQE-Regional Office

* a letter describing plans and operating procedures for the use of the site. This should include the volume of material for disposal.

* EP Toxicity Test results and bulk sediment chemical tests results for PCB and oil and grease to document that the materials are not hazardous (see "Environmental Testing", p.__).

* notification from the local Board of Public Health that the site has been approved. This must be sent to the Department within sixty days of the local approval.

* analysis of the moisture content of the dredged and excavated material (after dewatering).

For an existing landfill submit to the Division of Solid and Hazardous Waste:

* a letter identifying the landfill to be used and the volume of material to be placed at the site.

* bulk sediment chemical analyses of the heavy metals, PCB, oil and grease.

* analysis of moisture content of the dredged or excavated material (after dewatering).

* notification from the local Board of Health that the site has been approved

THE REVIEW PROCESS

For Approval of a New Landfill

- no formal timetable or review process

For Approval of an Existing Landfill

- no formal timetable or review process

ADDRESS

DEQE - Division of Solid and Hazardous Waste
100 Cambridge Street
Boston, MA 02202
617-727-3260

MASSACHUSETTS COASTAL ZONE MANAGEMENT OFFICE

Permit:	Federal Consistency Review Decision
Authority:	Coastal Zone Management Act of 1972, CFR 930 (16 U.S.C. 1451 et. seq. (federal act); M.G.L. c.21A; M.G.L. c.6A s. 2-7, (state act); Establishment of the Coastal Zone Management Program, 301 CMR 20.01-20.99 (state regulations); Coastal Zone Management Programs-Federal Consistency Review Procedures, 301 CMR 21.01-21.26

The federal Coastal Zone Management Act of 1972 as amended empowered state with approved Coastal Zone Management programs with the authority to review projects involving federal funding, federal permitting, and other federal actions proposed within the coastal zone to determine whether or not these actions were consistent with state coastal policy. Therefore, U.S. Army Corps of Engineers permits for construction in wetlands or for dredging or dredged material disposal cannot be issued until the project is determined to be consistent with the MCZM Program.

To expedite the federal consistency review process, dredge project plans should be designed in accordance with MCZM Policies and other applicable state environmental regulations. For technical assistance with project design, contact the MCZM staff early in the planning stage.

To be subject to federal consistency review, a project must meet three main criteria:

1. The project must be located within or must directly affect the Massachusetts coastal zone. The Massachusetts coastal zone is defined as:

> "land and waters within the area bounded by the seaward limit of the state's territorial sea (i.e., 3 miles from the baseline - see fig. #1) ... and landward to 100 feet inland of specified major roads, rail lines, or other visable rights-of-way ..." (Massachusetts Coastal Zone Management Program, p. 14).

A detailed road-by-road definition of the MCZM boundry is included in the publications; 1) Massachusetts Coastal Zone Management Program, 1978, and; 2) Massachusetts Coastal Regions and an Atlas of Resources (Chapter 5.)

Both publications are available at the MCZM Office and at town halls or libraries in coastal communities. For assistance in determining if a project is located within, or affects, the coastal zone, contact the MCZM Office.

In unusual cases, projects outside the coastal zone might be subject to federal consistency review if the project is expected to have impacts on the coastal zone (and criteria 2 and 3 below were met as well). For example, a project technically outside the coastal zone but potentially affecting an anadromous fish run in a coastal community might be subject to this review. As another example, the disposal of dredged material at an ocean site beyond the three mile limit jurisdictionis subject to consistency review if it was determined to have an impact on fisheries resources, state water quality, or the state's economy.

2. Projects which involve dredging, filling, construction, and federal actions. Virtually all dredging and navigation improvement projects involve a federal action of some type. The U.S. Army Corps of Engineers, for example, issues permits or licenses, provides funding, and/or conducts dredging and related projects for individuals, communities, or state agencies. Any of these licenses, permits,actions may be subject to MCZM federal consistency review if the project meets criteria 1 above and 3 below as well.

3. The project must involve MEPA review. If a project exceeds the categorically excluded thresholds of MEPA and if criteria 1 and 2 are met, the project will be subject to federal consistency review by MCZM.

HOW TO FILE

- Contact MCZM for technical and planning assistance and to determine whether the project will be subject to federal consistency review. Then submit to MCZM:

    * A copy of the project application for federal licenses, permits, etc.

    * A copy of the Secretarial Certification from MEPA that an EIR is not required or that the EIR is adequate.

    * Supporting project documentation (i.e., plans, maps, geological, chemical, biological test results, etc.).

    * Certification of federal consistency (a copy should also be sent to the federal agency involved in the project). This is usually a 2-3 page document produced by the applicant explaining how the project is consistent with the MCZM policies. The letter should cite the applicable MCZM policies and should briefly describe how the project is consistent with them. A sample letter is is provided in Appendix III.

REVIEW PROCESS

- Upon receipt of the required material the MCZM Office will publish a public notice of its formal review in the MEPA Environmental Monitor (see Appendix II). However, the MCZM federal consistency review process will not begin until the MEPA process is complete.

- The formal review period will begin with a 21-day public comment period, during which time comments regarding the project will be reviewed by MCZM. No decision will be issued by the MCZM Office until the close of the period for public comment.

  If the MCZM Office has not issued a decision within 3 months of the commencement of its review (the date of publication in the Environmental Monitor) it will notify the applicant and the federal agency of the status of the matter and the basis for further review. In all cases, the MCZM Office will issue its decision within 6 months of the commencement of its review.

- If the MCZM Office objects to the consistency certification, the federal agency involved may not proceed with its permit, license, or funding until the objection is removed by MCZM.

  The MCZM Office will notify the applicant and federal agency of the objection and will describe how the proposed activity will be inconsistent with specific MCZM Policies. MCZM will suggest alternative measures (if they exist) which would permit the proposed activity to be conducted in a manner consistent with the MCZM Policies. If the objection is based on the failure of the applicant to supply adequate information, the MCZM Office will specify the nature of the information requested and the reasons for requiring such information.

- Objection to a certification may be removed by project modification or through an appeals process.

- The federal consistency review is concluded when MCZM issues its final "concurrence with" or "objection to" the applicant's certification of federal consistency.

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Area of Critical Environmental Concern (ACEC) Program

The Area of Critical Environmental Concern (ACEC) program was established in 1974 in recognition of the fact that certain land and water resources are of such limited nature or central importance that the protection and management of these resources transcend purely local concerns. To be eligible for nomination

an area must contain at least five of the following features: coastal beach, dune or estuary; barrier beach system; saltmarsh; salt pond; shellfish bed; habitat for threatened, rare, or endangered species; fish spawning or nursery areas; other significant wildlife habitat; erosion area; flood plain; historic district or site; public recreational beach; or significant scenic site.

According to Policy 2 of the Massachusetts Coastal Zone Management Program, the following activities are categorically prohibited below mean high water within the water bodies comprising the ACEC's:

(1) new industrial discharges and the discharge of hazardous substances (once the water segments are classified anti-degradation),

(2) new dredging except for maintenance of existing channels or for enhancement of shellfish and other marine productivity,

(3) disposal of dredged material, except in instances when the material may be used for beach nourishment, dune stabilization, or marsh creation,

(4) direct discharges from new sewage treatment facilities, (once the water segments are classified anti-degradation).

A list of the six ACEC's designated as of this printing is presented in Figure .

ADDRESS:

Massachusetts Coastal Zone Management Office
100 Cambridge Street
Boston, MA 02202
(617) 727-9530

2) DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Ocean Sanctuaries Program

Permit:	Ocean Sanctuaries Program approval (no formal permit)
Authority:	Massachusetts Ocean Santuaries Act M.G.L. c.132A, ss. 13-16, 18 Ocean Sanctuaries Regulations 302 CMR 5.00

The purpose of the Ocean Sanctuaries Program is to protect the five Massachusetts' ocean sanctuaries from any exploitation, development or activity which would seriously alter or otherwise endanger the ecology or appearance of the ocean, the seabed, or subsoil of the seabed, or the Cape Cod National Seashore.

Because the Ocean Sanctuaries Act states that the Department "shall not require any additional permits," the Department acts as a trustee of the resources of the ocean sanctuary rather than as a permitting agency. Thus, for specific activities located in an ocean sanctuary, the Department will confer with licensing and permitting agencies of the Executive Office of Environmental Affairs to ensure that the activity is conducted in accordance with the provisions of the Act.

The policies of the Ocean Sanctuaries Program reflect the goals of the Massachusetts Coastal Zone Management Program, including the protection of ecologically significant resource areas and supporting the attainment of national water quality goals.

Prohibited activities in the five ocean sanctuaries, except as specifically allowed under Sections 8.1 - 8.9 of the Ocean Sanctuaries Regulations, that involve or may affect dredging or dredged material disposal activities include but are not limited to:

a. the building of any structure, such as marinas, on the seabed or under the subsoil;

b. the construction or operation of off-shore or floating electric generating stations;

c. the removal of any minerals, such as sand or gravel, and the drilling for oil or gas;

d. the dumping or discharge of any commercial or industrial wastes.

Allowable activities which involve dredging or which may be affected by dredging and dredged material disposal include:

a. projects authorized under M.G.L. c.91, including channel and shore protection projects and navigation aids only if they are not otherwise prohibited by the Ocean Sanctuaries Regulations and if they have received state and federal approvals;

b. any improvement or uses that are not specifically prohibited by ss. 14, 15, and 18 of the Ocean Sanctuaries Act so long as they don't change or extend such structures or uses and and otherwise approved by appropriate state and federal agencies. Such improvement may change or extend such structures if it is specifically permitted by ss. 8.1 - 8.9 of the Ocean Sanctuaries Regulations.

HOW TO FILE

- Contact the Ocean Santuaries Coordinator to determine whether your project is located in an Ocean Sanctuary. If the project is located in an ocean sanctuary, submit to the Coordinator:
    - a copy of the Environmental Notification Form (ENF) submitted to MEPA;
    - copies of all license and permit applications submitted to state and federal permitting agencies.

REVIEW PROCESS

Upon notification that an activity is proposed in an ocean sanctuary, the Ocean Sanctuaries Coordinator will:

- Initiate informal discussions with state licensing and permitting agencies to insure that the activity will be conducted in accordance with the Ocean Sanctuaries Act.
- If the Department finds that informal discussions fail to reconcile any differences with the licensing and permitting agency, and the agency is within the Executive Office of Environmental Affairs (EOEA), the Department will ask the Secretary of EOEA to resolve the conflict.
- It is the responsibility of all state agencies to issue, deny, or condition permits or licenses or to conduct their activities consistently with the provisions of the Ocean Sanctuaries Act.

ADDRESS

Department of Environmental Management
Ocean Sanctuaries Program
100 Cambridge Street
Boston, MA 02202
617-727-3260

3) DEPARTMENT OF FISHERIES, WILDLIFE, & ENVIRONMENTAL LAW ENFORCEMENT
Division of Marine Fisheries

Permit:	Division of Marine Fisheries project approval (no formal permit)
Authority:	Marine Fisheries Regulations M.G.L. c.130, ss. 1-105 322 CMR

The function of the Division of Marine Fisheries is to manage the manner of taking fish; the legal size limits of fish to be taken; the seasons and hours during which fish may be taken; the numbers or quantities of fish which may be taken; and the opening and closing of areas to the taking of fish.

The Division also reviews proposals for coastal activities to provide state licensing and permitting agencies with recommendations for the reduction, mitigation, and, if possible, elimination of impacts to marine resources. The Division provides data or identifies data needs necessary to render sound judgements regarding the regulation of such impacts.

Project reviews and recommendations of the Division support policies established by the Coastal Zone Management Program and comply with Division responsibilities to review and comment on coastal activities in accordance with the Fish and Wildlife Coordination Act (1934) amended 16 U.S.C. 661-666c) for the protection of fish and fish habitat in coastal waters and streams.

The Division takes an active part, when requested, in the review process of the Massachusetts Environmental Policy Act (MEPA) and the Massachusetts state DEQE - Chapter 91 Licensing Program in order to protect marine resources, promote maintenance dredging of fishing ports, and prevent hazards to navigation. The Division also takes part, when requested, in the review process of the U.S. Army Corps of Engineers Section 10 and Section 404 Permit Program in order to protect the marine environment and resources from harmful effects of coastal alteration, dredging or ocean dumping.

HOW TO FILE

Filing not required. The Division of Marine Fisheries will review proposals and permit applications for coastal activities upon request of MEPA, DEQE, MCZM or the U.S. Army Corps of Engineers.

REVIEW PROCESS

- Projects are reviewed on a case by case basis.

- The DMF review is based upon the resources involved, the time of year that the activity will occur, and the location of the area where the activity will take place.

  Areas of critical concern to the Division include fish and shellfish habitat, spawning, and nursery areas, and active fishing grounds. Impacts to water quality and the resultant effects to fish and shellfish habitat, health, and productivity are also reviewed and recommendations for the regulation of those impacts are provided to the state licensing or permitting agency.

ADDRESS

DEPARTMENT OF FISHERIES, WILDLIFE
& ENVIRONMENTAL LAW ENFORCEMENT
Division of Marine Fisheries
100 Cambridge Street
Boston, MA 02202
617-727-3194

UNITED STATES ARMY CORPS OF ENGINEERS/
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Permit:	Section 10, 103, 404 Permits
Authority:	Section 10 of the Riversand Harbors Act of 1899 (33 U.S.C. 403)
	Section 404 of the Clean Water Act (PL 05-217 86 Stat. 816, 33 U.S.C. 1344)
	Section 103 of the Marine Protection Research and Sanctuaries Act of 1972 (Ocean Dumping Act), 33 U.S.C. 1413)

Section 10 of the Federal River and Harbor Act of 1899 states that dredging from or diposal of material into navigable waters of the United States, or the construction of any project which affects the course, location, condition, or capacity of those waters requires a permit issued by the U.S. Army Corps of Engineers.

Section 404 of the Federal Water Pollution Control Act (Clean Water Act) authorizes the Corps of Engineers to issue permits for the disposal of dredged or fill materials in waters of the United States including wetlands.

The Clean Water Act authorizes EPA to co-review Corps 404 permit applications to determine whether the project is in compliance with federal law before the permit is issued. In addition, the Act empowers EPA to prohibit or restrict the use of any area as a discharge site whenever it determines that, after public notice and hearings, such discharge will have an unacceptable adverse effect on factors such as municipal water supplies, shellfish beds, fishing grounds (including spawning and breeding grounds), and recreational areas.

Similarly, Section 103 of the Ocean Dumping Act authorizes the U.S. Army Corps of Engineers to issue permits for projects involving the transportation of dredged material for disposal in ocean waters.

In the Act, ocean waters are the territorial sea which extends three miles from the EPA specified "baseline" (see Fig. #1). In Massachusetts, the baseline is a straight line which extends from Cape Ann to Cohasset.

Those disposal sites which are located in waters seaward of the territorial sea must be federally "designated" under certain procedures outlined by the U.S. Environmental Protection Agency or at a site selected by the District Engineer of the Corps (33 CFR 228, 5-6). Procedures used in disposal site designation include extensive physical, chemical, and biological evaluations of the ecosystem at the disposal site to evaluate the potential for the site to assimilate dredged material.

As in the Clean Water Act, EPA can prevent the issuance of a Section 103 permit from the Corps for a specific disposal project if it determines that the dumping of the dredged material will result in an unacceptable adverse impact on factors such as fisheries, human health, or marine ecosystem diversity, productivity, or stability. This determination is made on the basis of the results of physical, chemical, and biological testing of the sediments to be disposed of. and an analysis of the potential impacts of these sediments on the ecosystem at the disposal site. For a detailed description of these tests, refer to p.__ , "Environmental Testing".

HOW TO FILE

- Submit to the Corps of Engineers:

  * A completed Engineer Form 4345, which is the same form submitted to the local Conservation Commission for a Notice of Intent under the Wetlands Protection Act. This form requests a complete description of the project, names and addresses of adjoining property owners, and detailed information regarding location, street number, and names of waterways affected by the project;

  * A list of the status of all federal, state, and local certificates, permits and approvals, along with a copy of each permit application. This must include a copy of the application to the DEQE-Division of Water Pollution Control for a section 401 Water Quality Certificate;

  * A description of the purpose of the work;

  * One set of original or good quality reproducible drawings on 8½" x 11" sized cloth, film, or paper. Contact the Corps to identify drawing specifications. The set should include a vicinity map (which identifies the project by street, town, etc.), a plan view (including existing shorelines, high and low water lines, water depths, waterward dimension from a fixed structure, etc.), and an elevation and/or cross sectional view;

  * A consistency statement (statement that the project is consistent with the Massachusetts Coastal Zone Management Program Policies - see section on MCZM);

  * A description of alternatives to fill projects.

THE REVIEW PROCESS

- After receipt of an application and acceptable plans, the Corps will issue a Public Notice of the project to local, state, and federal agencies, interest groups, and individuals.

The Public Notice will describe the project and its location and it will include reproductions of maps, project diagrams, and project cross sections that are submitted with the application. The Public Notice will advertise the public comment period (not less than 15 days or more than 30 days but usually for 30 days) for the project and will identify the Corps contact person to whom comments should be submitted.

- The Massachusetts Coastal Zone Management Office will review the federal permit for consistency with the MCZM program and policies (for the detailed MCZM "federal consistency review" process, see p.__).

- The U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and the National Marine Fisheries Service will review the project for its compliance with the Ocean Dumping Act and the Clean Water Act, and other relevant federal Acts and may submit comments to the Army Corps of Engineers.

  These agencies may recommend permit conditions such as dredging methods and permitted disposal site locations. EPA is also authorized by these Acts to recommend the denial of a Corps permit if the project does not comply with provisions in the Ocean Dumping or Clean Water Acts. If this action is taken, the final decision on the issuance of the permit will be made by EPA and Corps officials in Washington, D.C.

- Once a decision is made to approve or deny the permit, the applicant will sign two copies of the permit form and return them to the Corps of Engineers with applicable fees. The permit is executed when the District Engineer countersigns the permit.

ADDRESSES:

United States Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254
(617) 894-2400

United States Environmental Protection Agency
JFK Building
Boston, MA 02203
(617) 223-5061

OTHER PLANNING CONSIDERATIONS

Permits Administered Locally

Several state permits for coastal construction and dredging require prior approval by the city or town in which the project is located.

These permits include:

- DEQE Site Approval for Local Landfills
- DEQE Wetlands Order of Conditions
- DEQE Sewer Extension and/or Construction Permit
- DEQE Subsurface Sewage Disposal Facilities

Municipalities have total jurisdiction over many other aspects of development, including traffic, easements and curb cuts, access and egress permits; utility access; zoning changes; and flood insurance (see following section).

Contact the local planning agency for an explanation of requirements and procedures in a particular city or town.

Title 5
Subsurface Sewage Disposal Facilities

Authority: MGL ch 111, s.17 c.21A, s.1 CMR 310.15.19

The purpose of Title 5 is to provide minimum standards for the protection of public health the environment when individual systems are used for the disposal of sanitary sewage in areas where municipal systems are not available.

For systems under 15,000 gallons per day the applicant applies to the local Board of Health. The board reviews the plans to determine whether or not the system conforms to Title 5 and local regulations.

In most cases, an individual sewage disposal system must consist of a septic tank discharging its effluent to a suitable subsurface disposal area and be located in an area where no surface water will accumulate. A reserve area of at least equal capacity, suitable for subsurface disposal and upon which no permanent structures will be constructed, must be provided.

Contact the Board of Health in the city or town in which the system is proposed for a complete description os any local regulations and the local review process. The Department of Environmental Quality Engineering will become involved in individual cases only if the local Board of Health fails to enforce the Title 5.

State Building Code
Flood Insurance - Floodplain Regulation

The National Flood Insurance Program (NFIP), administered by the Federal Emergency Management Agency (FEMA), provided subsidized flood insurance to property owners in participating communities that comply with NFIP guidelines (generally, compliance with M.G.L. ch. 131, s.40, Massachusetts Environmental Protection Act and s.744 of the State Building Code).

Once a community qualifies for the Emergency Phase of the NFIP and subsidized insurance protection is available, an extensive technical Flood Insurance Study of the community's flood hazard areas is conducted by an engineering contractor for the Federal Insurance Administration in preparation for entering the Regular Program.

This detailed analysis includes, at no cost to the communities, the production of a study text, Flood Insurance Rate Map and Flood Boundary/Floodway Map. The flood elevations derived from this study and the Flood Insurance Rate Map are the basis on which the actuarial insurance rates for the commmunity are established and specific floodplain management regulations formulated.

State Building Code
Floodplain Regulation

The 100-year coastal floodplain is divided into two zones which designate different degrees of hazard and require different floodplain management techniques to satisfy the damage reduction requirements of the NFIP.

The V-Zone (velocity zone) is defined as that portion of the coastal 100-year floodplain which would be inundated by tidal surges with velocity wave action. Generally, the V-Zone indicates the inland extent of a three-foot breaking wave, where the effective water depth during the 100-year flood decreases to less than four feet.

The A-Zone delineates that portion of the 100-year floodplain not subject to wave action, although the residual forward momentum of the breaking wave may impact the area.

FEMA regulations and Section 744 of the State Building Code require any new construction or improvements to existing structures in the V-Zone to be elevated on adequately anchored pilings or columns so that the bottom of the structural members supprting the lowest floor (excluding the pilings and columns) is elevated to the 100-year base flood level.

A registered professional engineer or architect must certify that the structure is securely fastened to adequately anchored pilings or columns so that the structure will adequately withstand velocity waters and hurricane wave wash forces. In addition, the space below the lowest floor must not be used for human habitation and must be free of obstructions, but may be enclosed with open latticework intended to collapse under load without jeopardizing the structural support of the building.

Additional standards for V-Zones require that fill not be used for structural support of new or substantially improved structures.

FEMA strongly discourages the construction of residential buildings in V-Zones due to the obvious vulnerability of the structures to wave attack. State Executive Order 181, policy four, states that no development shall be permitted in velocity zones of barrier beaches identified by DEQE. Technical assistance is available to community officials from the Massachusetts State Assistance Program and FEMA's Natural and Technological Hazards Division to aid in the proper administration of V-Zone construction design requirements.

ADDRESSES

Federal Emergency Management Agency or
Natural and Technological Hazards Division
John W. McCormack Post Office and Courthouse
Boston, MA 02109
617-292-2616

Flood Hazard Management Project
Division of Water Resources
100 Cambridge Street
Boston, MA 02202
617-727-3267

Martha's Vineyard Commission

A unique role for development is provided by the Martha's Vineyard Commission, which has permitting authority that may supercede the jurisdiction of municipal governments in cases where Vineyard development projects involve regional, (island-wide) impacts.

The Commission is charged with protecting the unique natural, historical, ecological, scientific and cultural resources of Dukes County by promoting sound local economies and ensuring that development does not impair these values.

Municipal government agencies review development proposals to determine if they will have a regional impact. If so, the proposal is submitted to the Commission, which is required to hold a public hearing within fourteen days of the official referral from the town.

The Commission will permit the referring agency to grant a development permit if it finds, after the public hearing that: a) the probable benefit from the proposed development will exceed the probable detriment; b) the proposed development will not substantially or unreasonably interfere with the achievement of the objectives of the general plan of any municipality or the general plan of Dukes County; c) the proposed development is consistent with municipal development ordinances and by-laws, or, if it is inconsistent, the inconsistency is necessary to provide the population of the municipality withadequate opportunities for housing, education, or recreation and d) if the proposed development is located in whole or in part within a designated district of critical planning concern, it is consistent with the regulations approved or adopted by the Commission.

Developments must demonstrate an unmistakable potential for contributing in a significant way to the rural quality of life in Martha's Vineyard before they can receive Commission approval.

ADDRESS

Martha's Vineyard Commission
P.O. Box 1447
Oak Bluffs, MA 02557
617-693-3953

DREDGE PROJECT FUNDING

The first step in planning a dredging project is to determine whether the navigational channel, harbor or berthing area in question is under federal , state or private jurisdiction. In Massachusetts, dredging may be coordinated by the Army Corps of Engineers (federal), the Department of Environmental Management-Division of Waterways (state), or by cities and towns themselves though contracts to private dredgers.

In the case of an area under federal jurisdiction, a city or town may obtain funds for dredging in one of two ways. A U.S. senator or representative may submit a bill for Congressional approval of specific projects. When dredging is approved, the Army Corps of Engineers will be authorized, under the Rivers and Harbors Act of 1899, to create and maintain channels. The Corps continues to be responsible for the mantainance of channels that were approved for dredging by Congressional action as far back as the late 1800's; however, funding must be appropriated each time a channel is dredged.

Legislative action by Congress may also provide the Chief of Engineers of the Army Corps with a project operations budget which may fund dredging and construction proposals that fall below specified threshholds for factors such as cost, size and other project parameters. Senators or representatives submit funding proposals for such projects directly to either a Corps district or the Chief of Engineers, who may authorize their funding.

A similar process is in place for funding dredging projects under state jurisdiction. Requests for dredging appropriations are made by cities, towns, or local groups to state legislators who then submit bills for specific dredging projects to the Massachusetts House of Representatives or the Senate. If the Act is passed by the Legislature and funding is appropriated, the project will be carried out by the state Department of Environmental Management-Division of Waterways.

In addition to these "line item" bills, the state legislature appropriates fundsto the Division of Waterways for that agency's operations budget. Periodically, the Division will hold a "Rivers and Harbors Hearing" during which cities and towns in the Commonwealth may document the need for harbor and channel dredging, which may be funded through this budget. Unlike the U.S. Army Corps of Engineers, Waterways is not obligated to periodically maintain channels that they originally dredged.

Finally, municipalities, agencies, or individuals may choose to fund a dredging project. In this situation, a contract is written between the funding agency or individual and the engineering/dredging firm performing the work. In many cases, funds for city or town projects are secured through local appropriations.

DREDGING METHODS

Choice of dredging technique depends on the particular characteristics of a project, such as the grain size, chemical compsition and the volume of material to be dredged; the wave energy, strength and duration of currents in the dredging area; the distance of the dredging project from the disposal site; and the location and size of the disposal site itself.

The two most frequently used dredging techniques are mechanical and hydraulic dredging:

Mechanical Dredges

Mechanical dredges are usually used in nearshore areas. They remove bottom sediments with a mechanically operated bucket. The dredged material is stored on a barge or scow or placed directly on a land transport vehicle such as a truck and carried to a disposal site.

This method is appropriate for work in restricted locations, between rocks or jetties, in nearshore areas of high wave or current energy and where the disposal site is a great distance from the project area.

Of the various mechanical dredges available, three types are commonly used:

The bucket ladder is the most efficient in terms of the volumne of material excavated per unit of time; however, this method causes the greatest amount of resuspension of sediment. On this dredge, a revolving chain of buckets continuously digs into the sediments and are mechanically moved up the ladder. Sediment is deposited either in the dredge's own storage area or on a barge or scow on the side of the dredge. The dredged material is then transported to a disposal site.

The clamshell is the dredge used most often in Massachusetts. It has a derrick equipped with a two-edged bucket grab designed to dredge sediments of various grain sizes. The open jaws are sent into the sediments and closed via tension from a wire attached to the derrick. The grab deposits the dredged material on a barge or scow for transport to a disposal site.

The dipper dredge resembles the mechanical excavating shovel used on land. It is actually a mechanical shovel placed on a barge, used for dredging rock and other hard sediment. Again, a barge or scow is used for transport to the disposal site.

Hydraulic Dredges

Hydraulic dredges incorporate dredging and disposal of sediments into one operation. Sediments are loosened by either a rotary cutter, a water jet or a head sliding over the bottom. Pumping action from suction piping

attached to the ship loosens the bottom sediments. These materials are then diluted into a slurry and either discharged through a pipeline to a land or water site (cutterpan, dustpan dredges) or stored in a hopper (hopper dredge). A hopper is a large bin on the dredge vessel used to store dredged materials on route to a disposal site, where the bottom doors of the dredge open and the material is released.

Each type of hydraulic dredge has a distinct advantage. Pipeline dredges are usually preferred in situations where sand is dredged and utilized for beach nourishment. Using booster pumps, the sand can be deposited on land from dredges several miles offshore. Pipeline dredges are not practical for use in high current regimes or in hazardous navigational situations due to the great potential for damage to the suction pipes.

Hopper dredges can be used in hazardous conditions and are also preferred in those situations in which pumping to a disposal site is not an economically viable alternative.

The sidecast dredge is only practical in areas where currents are slow and do not return sediments back into the area dredged and where sediments are not contaminated. However, because theis technique does not incur the high cost of transporting materials to a disposal site, it is a cost effective dredging method in many cases.

Dredged Material Disposal/Dewatering

Obtaining a permit for dredged material disposal is typically the most difficult aspect of the dredging permitting process. Problems arise because the material to be dredged contains levels of contaminants which are too high to meet the ocean disposal criteria established by federal regulations; the material to be dredged is of a different grain size than the material present at the proposed disposal site; or no upland site is available for the dredged sediments.

There are three general options for locating a dredged material disposal site: ocean, in-harbor, and upland. Under state and federal regulations, disposal of dredged material in waters of the United States (sites covered under section 404 of the federal Clean Water Act, including in-harbor sites) must take place at EPA sites "specified" on a case by case basis and in ocean waters (sites covered under section 103 of the federal Ocean Dumping Act), at EPA "designated" sites (see page___; "U.S. Army Corps of Engineers", and map on page__.)

At present, several federally "specified" dredged material disposal sites exist in Massachusetts waters, but these can only be used under certain conditions. One site, located approximately one half mile off the coast of Newburyport, is used only for the clean sand material dredged from the Merrimack River. Two other sites located at each end of the Cape Cod Canal, and are used for the clean sand material dredged from the canal. Another "in-shore" dredged material disposal site is located in Cape Cod Bay, and has only been permitted by state agencies for the disposal of material from Wellfleet Harbor.

Only one "section 103" ocean site off the Massachusetts coast has been given interim designation by EPA for dredged material disposal. This is the "Marblehead Dredged Material Disposal Site" (Foul Area), located southeast of Marblehead at coordinates 42° 25.7N, 70° 34.0W. To obtain a permit from the U.S. Army Corps of Engineers to transport and dispose of dredged material at this site, physical, chemical, and biological tests of the dredge sediments must indicate that the material is acceptable for ocean disposal.

State permits required for the disposal of dredged material at "section 404" sites include: 1) a permit from the DEQE-Division of Wetlands and Waterways Regulation, 2) a Water Quality Certificate from the DEQE-Division of Water Pollution Control, 3) a Federal Consistency Review Decision from the Masssachusetts Coastal Zone Management Office, and, if appropriate, 4) approval by the Massachusetts Ocean Sanctuaries Program.

The only state permit required for disposal at "section 103" sites located outside of the baseline (refer to map on page), is a Federal Consistency Review Decision from the Massachusetts Coastal Zone Management Office (permits for dredging are discussed elsewhere in this handbook).

The regulation of upland disposal of dredged material, which usually requires on land dewatering of the sediments depends both on the location of the disposal site and on the method of disposal.

If the disposal site is located on the upland in a wetlands buffer zone, an Order of Conditions is required from the local Conservation Commission

If the site is located in the uplands within the coastal zone, a Federal Consistency Review Decision is required from the Massachusetts Coastal Zone Management Office.

If the dredged material will be dewatered and the effluent (liquid portion) is allowed to drain into a marine system, a Water Quality Certificate is required from the DEQE-Division of Water Pollution Control.

Finally, if dredged material is disposed of at an upland site, such as a landfill, a "site approval" is required from the state DEQE-Division of Solid and Hazardous Waste. This approval is based on factors such as chemical composition and salt content of the dredged sediment and the potential for contamination of groundwater resources by pollutants and/or salts.

ENVIRONMENTAL TESTING REQUIREMENTS

Environmental testing of the material to be dredged is required by state and federal agencies in determining whether dredging and dredged material disposal permits should be issued. Permit applicants should contact the DEQE-Division of Water Pollution Control, DEQE-Division of Solid and Hazardous Waste, the Coastal Zone Management Office and the Army Corps of Engineers to find out which tests will be required.

The testing regime involves examining the physical and chemical characteristics of the sediments to be dredged and predicting the effects of dredging and disposal activities on either marine biota (ocean disposal) or terrestrial and groundwater systems (upland disposal).

Physical analysis (grain size composition) of sediments to be dredged is requried by state and federal regulations for all dredging projects. Chemical analysis will be required if the material will be disposed of in ocean waters and if the sediments contain silt or clay. However, if physical analysis indicates that the material grain size is coarse sand, chemical testing may be unnecessary for ocean disposal. If dredged material will be disposed of at an upland location, chemical tests are requried to assure that they are not hazardous and will not impact groundwater supplies.

Biological testing is also required if the results of the previous two tests indicate that the sediments are fine grained and/or contaminated according to state Water Pollution Control Regulations and if disposal of the dredged material will be below the mean low water shoreline.

SEDIMENT SAMPLING

Both the sampling location and the method of sediment sampling for environmental analyses are critical to the validity of the test results. Sampling locations must be as representative of the area to be dredged as possible, while at the same time indicating "hot spots" or areas of elevated contaminant levels. Therefore, sampling sites should include locations in the vicinity of known wastewater outfalls, areas of accidental spillage and other known or potentially contaminated areas.

Sediment sampling can be done by the core or the grab sampling method. The method chosen depends on the sediment type, depth of dredging, sediment history, recent and historic chemical inputs into areas proposed for dredging, and other related factors determined by the state DEQE-Division of Water Pollution Control and the Army Corps of Engineers.

In the core sampling method, a hollow tube is driven into the sediments and the entire sediment core is brought to the surface. The material in the core is then either mixed and then tested or sampled at both the surface and to some depth (usually to the depth of dredging) and tested separately.

The former method is allowed in situations where the core sediments are visually homogeneous. By mixing up the sediment collected, as would occur during dredge disposal, the surface material, which is usually more contaminated, is diluted by the deeper, cleaner sediments. This presents a more realistic picture of potential chemical impact at the disposal site.

The latter core testing method is used when a visual difference is observed in the top and bottom layers of the sediment collected or if the project area history indicates a recent chemical input in the sediments.

In the grab sample collection method, a double sided scoop with teeth is lowered into the surface sediments for collection. This procedure might be required if both the sediment grain size and project are history indicate that both surface and subsurface sediments are likely to be clean; a core sample cannot be taken; or the depth of the dreging is between 1 and 2 feet.

State and federal agencies should be contacted for technical assistance regarding the sampling scheme during the early planning phase of a project. This can save time and money by avoiding improper sediment collection and the need for re-sampling.

PHYSICAL TESTS

Analysis of the physical characteristics of the sediment to be dredged is called the grain size distribution analysis. Knowledge of sediment grain size is necessary in assessing the potential for dredged material to be transported from the disposal site by waves or currents in cases of ocean disposal.

Grain size is also used as an indicator of the level of sediment contamination and in locating an ocean disposal site with sediments of similar grain size to the dredged material. Matching grain sizes increases the potential for recolonization at the disposal site by organisms which are present at the site before disposal occured.

If sediments are composed of clean, sandy material, disposal on beaches as part of a nourishment program is often possible. Grain size analysis is also requried for upland disposal of dredged material.

CHEMICAL TESTS (required for ocean disposal)

Two principle types of chemical analyses - bulk sediment chemical analysis and elutrite tests - are utilized when dredge material will be disposed of in the ocean.

Bulk sediment analysis examines the chemical composition of dredged sediment in its solid state, or its state at the time of collection from the marine environment in order to determine the degree to which it is contaminated.

If the results indicate low levels of contamination according to the state Division of Water Pollution Control, biological testing may not be requried. If levels of contamination are high, biological testing is called for. Dredging and dredged material disposal may be conditioned, or may not be permitted, depending on these test results.

The effectiveness of the bulk sediment test in identifying environmental impacts is somewhat limited. Certain chemicals are tightly bound to the sediment and are not available to the water column or to marine organisms unless the sediments are agitated or resuspended. Agitation of sediments occurs both during dredging as the material is scooped from the harbor bottom by the dredge and during disposal of the material as sediments are released into the water column either by a pipeline or a vessel. Thus, the potential exists for chemicals to be released from the sediments to the water column at the dredging and disposal sites. This is especially important for disposal in low energy "in-harbor" sites with run-off from the dredged material back to a wetland/estuarine system, or if hydraulic dredging is proposed.

If these disposal options are planned, the elutiate tests may be requried. This procedure consists of agitating a dredged sediment/seawater mixture so that chemicals may be released from the sediment to the seawater. The seawater is then analyzed for its chemical composition and the reuslts evaluated to determine the concentration of chemicals which might be released from the sediments and put into a soluable form as a result of dredging and disposal or from sediment runoff.

For upland disposal of dredged material, both the bulk sediment chemical test and the E.P. Toxicity Test are requried to determine if the sediments are classified as hazardous waste according to the DEQE-Division of Water Pollution Control and Division of Solid and Hazardous Waste regulations.

In the E.P. Toxicity Test, the dredged sediments are shaken with water at a pH of 5 (acidic), filtered and the leachate collected and analyzed for heavy metals and organics that would similarly leach out when the sediments are deposited on an upland site (landfill). Such leachate could impact groundwater resources.

BIOLOGICAL TESTS

Biological analysis of dredged sediment also fall into two categories: bioassay and bioaccumulation tests.

In the bioassay test, representative marine species are placed in aquarium tanks containing seawater and either clean control sediments, (reference sediment collected from an area near the disposal site but not affected by the disposal site), dredged sediments an elutriate mixture of dredged sediments or a suspended particulate fraction of the dredged sediments.

After 10 days, the mortality count of organisms from tanks containing the dredged material is compared with the mortality count of organisms from tanks containing the dredged material is compared with that of that of organisms from the reference sediment. The results provide an indication of the potential adverse effects on morine biota from dredged sediments at the disposal site.

The bioaccumulation test evaluates the potential for marine organisms to incorporate chemicals from dredged material within their tissues. Studies have shown that tissue uptake of certain chemicals by marine species may cause detrimental effects other than death. For example, high metal concentarations in shellfish tissue have been associated with adverse impacts on their feeding and reproduction. Studies have also shown that certain chemicals are transferred through the food chain.

To test for bioaccumulation potential, representative marine species are placed in dredged material for ten days. Tissues from the surviving organisms are ground and analyzed for chemical composition. The same procedure is carried out on organisms that were placed in reference sediments and the results are compared.

If tissues of organisms from dredged sediments have statistically significantly higher conteminant concentrations from those of the reference sediments, the proposal for ocean disposal is subjected to closer scrutiny and may be rejected.

TABLE 1

LIST OF STATE AND FEDERAL PERMITS FOR DREDGING

Permit	Authority
STATE	
- MEPA Unit Secretarial Certificate	Massachusetts Environmental Policy Act M.G.L. c. 30, ss. 62-62H Massachusetts Environmental Policy Act Regulations 310 CMR 10.00 - 10.35
- DEQE - Division of Wetlands and Waterways Regulation/ Conservation Commission Wetlands Order of Conditions	Massachusetts Wetlands Protection Act M.G.L. c.131, s. 40 Massachusetts State Wetlands Regulations Part I - Regulations for All Wetlands 310 CMR 10.01 - 10.20 Part II - Additional Regulations for Coastal Wetlands 310 CMR 10.21 - 10.50 Part III - Additional Regulations for Inland Wetlands 310 CMR 10.51 - 10.98
- DEQE - Division of Wetlands and Waterways Regulation Chapter 91 License of Permit	Massachusetts State Waterways Regulations M.G.L. c.91 310 CMR 9.01 - 9.99
- DEQE - Division of Water Pollution Control Water Quality Certificate	Section 27(12) of the Massachusetts Clean Waters Act M.G.L. c.21, ss. 26-53 314 CMR 9.00 - 9.99
- Coastal Zone Management Federal Consistency Review Decision	Coastal Zone Management Act of 1972 16 U.S.C. 1456(c)(3)) (Federal Act) M.G.L. c. 21A, s. 4A; (State Act); Establishment of the Coastal Zone Management Program, 301 CMR 20.01 - 20.99 (State Regulations); Coastal Zone Management Programs Federal Consistency Review Procedures 301 CMR 21.01 - 21.26

TABLE 1 (continued)

LIST OF STATE AND FEDERAL PERMITS FOR DREDGING

Permit	Authority
STATE	
- Department of Environmental Management Wetlands Order of Restrictions	Massachusetts Wetlands Restriction Act M.G.L. c. 130, s. 105 302 CMR 4.01 - 4.19 (Regulations)
FEDERAL	
- U.S. Army Corps of Engineers Section 10, 404, 103 permits	Section 10 of the Rivers and Harbors Act of 1899 (33 U.S 33 CFR 320 - 329 (Regulations) Section 404 of the Clean Water Act (33 U.S.C. 1344) 33 CFR 320 - 329; 40 CFR 231 (Regulatio Section 103 of the Marine Protection Research and Sanctuaries Act of 1972 (Ocean Dumping Act) (33 U.S.C. 1413); 33 CFR 320 - 329 (Regulations)

TABLE 2

Summary of permits for Specific Dredged Material and Sewage Sludge Disposal Actions

Permit or Approval	Deep Ocean[1] (incl. Foul Area)	Shallow Water[2]	Within a River	Upland[3]	Beach Restoration
1. Army Corps of Engineers	X	X	X	X[4]	X
2. MEPA Secretarial Decision		X	X	X	X
3. Ch.91 - DEQE Waterways		X	X		
4. Water Quality Certificate DEQE - Water Pollution Control		X	X	X5	X
5. MCZM Consistency Certification	X	X	X	X6	X
6. Wetlands Order of Conditions DEQE - Wetlands		X	X	X	X
7. Solid Waste Disposal Facility Approval DEQE - Solid & Hazardous Waste				X	
8. Hazardous Waste Upland Site Approval DEQE - Solid & Hazardous Waste	X6	X	X	X	X

1. outside waters of the Commonwealth (beyond the Territorial Sea)
2. within Commonwealth waters (between mean high water and three miles from the baseline
3. above mean high water
4. if wetlands are employed
5. if dewatering effluent will drain into marine waters
6. if the upland area is in the coastal zone

TABLE 3

Sediment Classification from Water Pollution Control Regulations

Classification of Dredge or Fill Material by Chemical Constituents
All units are in parts per million, dry weight

	Category One	Category Two	Category Three
Arsenic (As)	10	10-20	20
Cadmium (Cd)	5	5-10	10
Chromium (Cr)	100	100-300	300
Copper (Cu)	200	200-400	400
Lead (Pb)	100	100-200	200
Mercury (Hg)	0.5	0.5-1.5	1.5
Nickel (Ni)	50	50-100	100
Polychlorinated Biphenyls (PCB)	0.5	0.5-1.0	1.0
Vanadium (V)	75	75-125	125
Zinc (Zn)	200	200-400	400

Category One materials are those which contain no chemicals listed above in concentrations exceeding those listed in the first column.

Category Two materials are those which contain any one or more of the chemicals listed in above in the concentration range shown in the second column.

Category Three materials are those materials which contain any chemical listed in above in a concentration greater than shown in the third column.

Other important man-induced chemicals or compounds not included in the above table which are known or suspected to be in the sediments at the dredge site will of course be given weight in the classification of the material and the choice of dredging and disposal methods. When the Division has reason to suspect the presence of any other toxins due to a nearby discharge, additional testing for that element may be required.

Classification of Dredge or Fill Material by Physical Characteristics

	Type A	Type B	Type C
Percent silt-clay	60	60-90	90
Percent water	40	40-60	60
Percent volatile solids (NED method)	5	5-10	10
Percent oil and grease (hexane extract)	0.5	0.5-1.0	1.0

Type A materials are those materials which contain no substances listed above in amounts exceeding those listed in the first column.

Type B materials are those materials which contain any one or more of the substances listed above in the concentration range shown in the second column.

Type C materials are those materials which contain any substance listed above in a concentration greater than shown in the third column.

Appendix 1

Glossary

Bank - the seaward face or side of any elevated landform other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action, or other wetland.

Beach - that area of land composed of unconsolidated sediments adjoining any pond, lake, stream, river, creek, ocean, sea, or water subject to wave and current action.

Creek - any body of running water including brooks, continuous or intermittent flowing, moving in a definite channel in the surface of the ground due to a hydraulic gradient. A portion of a creek may flow through a culvert or beneath a bridge. Such a body of water which does not flow throughout the year (i.e., which is intermittent) is a creek except for that portion upgradient of all bogs, swamps, wet meadows and marshes.

Dewatering - the removal, by evaporation, draining, or extraction, of liquid associated with dredged material.

Dredging - the removal of materials including but not limited to, rocks, bottom sediments, debris, sand, refuse, plant or animal matter, in any excavating, cleaning, deepening, widening, or lengthening, either permanently or temporarily, of any tidelands, rivers, streams, ponds, or other waters of the Commonwealth.

Dune (coastal) - any natural hill, mound or ridge of sediment landward of a coastal beach deposited by wind action or storm overwash. Coastal dune also means sediment deposited by artificial means and serving the purpose of storm damage prevention or flood control.

EIR - Environmental Impact Report (required by the state Executive Office of Environmental Affairs (EOEA).

EIS - Environmental Impact Statement (required by a federal agency).

Elutriate - the liquid associated with dredged sediments which is released during dredging and disposal.

Estuaries - any area where fresh and salt water mix and tidal effects are evident, or any partially enclosed coastal body of water where the tide meets the current of any stream or river.

Fill - to deposit material so as to raise an elevation, either temporarily or permanently.

Flat (tidal) - any nearly level part of a coastal beach which usually extends from the mean low water line landward to the more steeply sloping face of the coastal beach or which may be separated from the beach by land under the ocean.

Flooding - a local and temporary inundation or a rise in the surface of a body of water, such that it covers land not usually under water.

Groin - a shore protection structure built of rock, steel, timber, or concrete, usually constructed perpendicular to the shoreline to trap sand being transported in the longshore current.

Ground Water Supply - water beneath any land surface in the zone of saturation.

Jetty - a structure built at the mouth of a river or tidal inlet to help deepen and stabilize a channel. Jetties are designed to prevent shoaling of the channel and to direct and confine the stream or tidal flow.

MEPA - Massachusetts Environmental Policy Act.

River - a natural stream of water that empties to any ocean, lake, or other river and has a continuous or intermittent flow.

Sedimentation - the process of deposition of sediment from a state of suspension in air or water. Usually results from the interruption of longshore drift resulting from jetty and groin construction.

Shoal (noun) - a raised elevation of the sea bottom comprised of any material except rock or coral, which may endanger surface navigation.

Shoal (verb) - to become shallow gradually, to cause to become shallow, or to proceed from a greater to a lesser depth of water.

Siltation - the deposition or accumulation of silt that is suspended throughout a body of standing water. Usually results from processes such as sediment transport by currents.

Stream - same as creek.

Appendix 111

Joan Doe
142 Neponset Circle
Milton, MA

September 30, 1983

Richard F. Delaney, Director
Massachusetts Coastal Zone Management Office
100 Cambridge Street, Room 2006
Boston, Massachusetts 02202

Dear Mr. Delaney:

This letter serves as our federal consistency certification which states the consistency of our project with the Massachusetts Coastal Zone Management Program (MCZMP) and policies. Our project involves dredging 10,000 c.y. of sediment from the Clamdiggers River and construction of a 200 slip marina. For your review of the project and the consistency certification, we have also included engineering plans, environmental test results, a description of project alternatives which have been studied and documentation of the investigation to locate an upland disposal site for the dredged material.

We have addressed the applicable MCZM policies and their relationship to the proposed project as follows:

MCZM Policy 1. Protect wetlands and buffers.

No dredging, substantial work, or alteration will occur in salt marsh in the project area.

MCZM Policy 4. Construction in water bodies and contiguous lands to minimize interference with circulation, sediment transport, and to protect water quality.

The proposed project will not interfere with water circulation or sediment transport as it will be designed to conform with local current patterns and will be of an open pier structure.

MCZM Policy 5. Minimize adverse effects on water quality, physical processes, marine productivity, and public health.

The Foul Area Ocean Disposal Site was selected as the disposal option for the project because intensive investigation to locate an upland site (documentation enclosed) could not identify an area which was economically or environmentally suitable for dredged material disposal. The bulk sediment

and bioassay/bioaccumulation test results indicate that the sediments to be dredged do not contain elevated levels of contaminants and do not indicate the potential to impact marine resources at the ocean disposal site.

We hope that this satisfies your requirements for your federal consistency review. For further information requests, please do not hesitate to call.

Sincerely,

Joan Doe